



PvuI (7)
SgfI (6)
MfeI (82) **EcoNI (96)**

1 GGATCTGGATCGCTCCGGTGCCCGTCAGTGGGAGAGCGCACATCGCCACAGTCCCGGAGAAGTTGGGGGAGGGGTGGCAATTGAACGGGTGCCTA

101 GAGAAGTGGCGCGGGTAAACTGGAAAGTGATGTCGTGACTGGCTCCGCCTTTTCCGAGGGTGGGGGAGAACCCTATATAAGTGCAGTAGTCGCC

HindIII (245)
Bsu36I (291)

Psp1406I (203)
PvuII (239)
EcoNI (287)

201 GTGAACGTTCTTTTTCGCAACGGGTTTCCGCCAGAACACAGCTGAAGCTTCGAGGGCTCGCATCTCTCTTACAGCGCCCGCCGCTACCTGAGGCC

301 GCCATCCACGCGGTTGAGTGCAGTCTGCCGCTCCCGCCTGTGGTGCCTCTGAAGTGCCTCCGCGCTAGGTAAGTTTAAAGCTCAGGTCGAGACC

NgoMIV (441)

401 GGGCCTTTGTCCGGCGCTCCCTTGGAGCCTACCTAGACTCAGCCGGCTCTCCACGCTTTGCTGACCCTGCTTGTCTAACTCTACGCTTTTGTTCGTTT

NcoI (560)
BstEII (555)

KasI (535)
AgeI (552)

501 TCTGTTCTGCGCCGTTACAGATCCAAGCTGTGACCGGGCGCTACCTGAGATCACCGGTCCACCATGGCTTTTGTGCATATCAGATGCTTGTGTTTCATTCT

1▶ M A F V H I R C L C F I L

BamHI (666)

Bsu36I (646)
SspI (660)

601 TCTTTGTACAATAACTGGCTATTCTTTGGAGATAAAAGTAAATCCTCCTCAGGATTTTGAATATTGGATCCTGGACTTCTGTTATCTCTATTTGCAA

13▶ L C T I T G Y S L E I K V N P Q D F E I L D P G L L G Y L Y L Q

PvuII (780)

701 TGGAAACCTCTGTGTTTATAGAAAAATTAAGGGCTGTACACTAGAATATGAGTTAAAAATACCGAAATGTTGATAGCGACAGCTGGAAGACTATAATTA

47▶ W K P P V V I E K F K G C T L E Y E L K Y R N V D S D S W K T I I

BsiWI (859)
SnaBI (857)

801 CTAGGAATCTAATTTACAAGGATGGGTTTGTCTTAATAAAGGCATTGAAGGAAAGATACGTACGCATTTGTCAGAGCATTGTACAAATGGATCAGAAGT

80▶ T R N L I Y K D G F D L N K G I E G K I R T H L S E H C T N G S E V

NcoI (907)
HindIII (917)
EcoRV (930)

901 ACAAAGTCCATGGATAGAAGCTTCTTATGGGATATCAGATGAAGGAAGTTTGGAACTAAAATTCAGGACATGAAGTGTATATATTATAACTGGCAGTAT

113▶ Q S P W I E A S Y G I S D E G S L E T K I Q D M K C I Y Y N W Q Y

1001 TTGGTCTGCTCTTGGAACTGGCAAGACAGTATATTCTGATACCACTATAACCATGTTTTCTGGTATGAGGGCTTGGATCATGCCTTACAGTGTGCTG

147▶ L V C S W K P G K T V Y S D T N Y T M F F W Y E G L D H A L Q C A

1101 ATTACCTCCAGCATGATGAAAAAATGTTGGATGCAAACTGTCCAACCTGGACTCATCAGACTATAAAGATTTTTTATCTGTGTTAATGGATCTTCAA

180▶ D Y L Q H D E K N V G C K L S N L D S S D Y K D F I C V N G S S K

XmnI (1267)

1201 GTTGAACCCATCAGATCCAGCTATACAGTTTTTCAACTTCAAATATAGTTAAACCATTGCCACCAGAATTCCTTTCATATTAGTGTGGAGAATTCATT

213▶ L E P I R S S Y T V F Q L Q N I V K P L P P E F L H I S V E N S I

EcoO109I (1329)

1301 GATATTAGAATGAAATGGAGCACACCTGGAGACCCATTCCACCAAGGTGTACACTTATGAAATTTGTATCCGAGAAGACGATATTTCTGGGAGTCTG

247▶ D I R M K W S T P G G P I P P R C Y T Y E I V I R E D D I S W E S

1401 CCACAGACAAAAACGATATGAAGTTGAAGAGGAGACAAATGAAAGTGAAGACCTATGCTTTTTTGTAAAGATGAAGGTCAATATATATTGTGCAGATGA

280▶ A T D K N D M K L K R R A N E S E D L C F F V R C K V N I Y C A D D

1501 TGGAAATTTGGAGCGAATGGAGTGAAGGAATGTTGGGAAGGTTACACAGGCGCAGACTCAAAGATTATTTTCATAGTACCAGTTTGTCTTTTATA

313▶ G I W S E W S E E C W E G Y T G P D S K I I F I V P V G C L F F I

1601 TTCCTTTTGTACTTCTTTCCTTATTGTGGAGAAGGAAGAACTGAACCCACATTGAGCCTCCATGTGGATCTGAACAAGAAGTGTGTCTTATGAAG

347▶ F L L L L L C L I V E K E E P E P T L S L H V D L N K E V C A Y E

NheI (1740)

BstXI (1737) **MseI (1746)**

1701 ATACCCTCTGTTAAACCACAATTTCTTGACATAGAGCCAGCTAGCTGGCCAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAATG

380▶ D T L C •

HpaI (1878)
MfeI (1889)

1801 CAGTGAATAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAAGTTAAACAACAACATTCATTC

1901 ATTTTATGTTTCAGGTTTCAGGGGAGGTGTGGGAGTTTTTAAAGCAAGTAAACCTCTACAAATGTGGTATGGAATTTCTAAAATACAGCATAGCAAAA

2001 CTTAACCTCAAATCAAGCCTCTACTGAACTCTTTCTGAGGGATGAATAAGGCATAGGCATCAGGGGCTGTTGCCAATGTGCATTAGCTGTTGCAG

2101 CCTCACCTCTTTTCATGGAGTTAAGATATAGTGATTTTCCCAAGTTTGAAGTACTGCTTTCATTCTTTATGTTTTAAATGCACTGACCTCCACATT

SspI (2213)
SwaI (2227)
EcoO109I (2288)

2201 CCCTTTTTAGTAAAAATTCAGAAAAATTTAAATACATCATTGCAATGAAAAATAATGTTTTTATTAGGCAGAATCCAGATGCTCAAGGCCCTTCATA

2301 ATATCCCCAGTTTAGTAGTTGGACTTAGGGAACAAAGGAACCTTAAATAGAAATGGACAGCAAGAAAGCGAGCTTCTAGCTTTAGTTCCTGGTGTACT

141▶ • N R T Y K

SacI (2488)

2401 TGAGGGGATGAGTTCCTCAATGGTGGTTTTGACCAGCTTGCATTCTCAATGAGCACAAAGCAGTCAGGAGCATAGTCAGAGATGAGCTCTCTGCA

135▶ L P I L E E I T T K V L K G N M E I L V F C D P A Y D S I L E R C

BstXI (2517)

2501 CATGCCACAGGGGCTGACCACCTGATGGATCTGTCCACCTCATCAGAGTAGGGGTGCTGACAGCCACAATGGTGTCAAAGTCTTCTGCCGTTGCTC

102▶ M G C P S V V R I S R D V E D S Y P H R V A V I T D F D K Q G N S

StuI (2652)

2601 ACAGCAGACCCAATGGCAATGGCTTCAGCACAGACAGTGACCCTGCCAATGTAGGCCTCAATGTGGACAGCAGAGATGATCTCCCCAGTCTTGGTCTGA
68 V A S G I A I A E A C V T V R G I Y A E I H V A S I I E G T K T R I XmnI (2794)

2701 TGGCCGCCCCGACATGGTGTCTGTTGTCCTCATAGAGCATGGTATCTTCTCAGTGGCGACCTCCACCAGCTCCAGATCCTGCTGAGAGATGTTGAAGT
35 A A G V H H K N D E Y L M T I K E T A V E V L E L D Q Q S I N F T

BspHI (2802) **AseI (2860)**

2801 CTTCATGATGGCCCTCCTATAGTGAGTCGTATTATACTATGCCGATATACTATGCCGATGATTAATTGTCAAACAGCGTGGATGGCGTCTCCAGCTTA
2 K M

SacI (2917)

2900 TCTGACGGTTCACTAAACGAGCTCTGCTTATATAGACCTCCCACCGTACACGCCTACCGCCATTTGCGTCAATGGGGCGGAGTTGTTACGACATTTTGG

SpeI (3015)

3000 AAAGTCCCGTTGATTTACTAGTCAAAAACAACTCCATTGACGTCAATGGGGTGAGACTTGAAATCCCCGTGAGTCAAACCGTATCCACGCCATT

SnaBI (3143)

3099 GATGTACTGCCAAAACCGCATCATCATGGTAATAGCGATGACTAATACGTAGATGTACTGCCAAGTAGGAAAGTCCATAAGGTCACTGTACTGGGCATAA

NdeI (3248)

3199 TGCCAGGCGGGCCATTTACCGTCATTGACGTCAATAGGGGGCGTACTTGGCATATGATACACTTGATGTACTGCCAAGTGGGCAGTTTACCGTAAATACT

3299 CCACCCATTGACGTCAATGGAAAGTCCCTATTGGCGTTACTATGGGAACATACGTCATTATTGACGTCAATGGGCGGGGTCTGTTGGCGGTGAGCCAGG

PstI (3427) **SdaI (3426)** **PacI (3434)** **BspLU11I (3444)**

3399 CGGGCCATTTACCGTAAGTTATGTAACGCTG C A G G T T A A T T A A G A A C A T G T G A G C A A A A G G C C A G A A A A G G C C A G A A C C G T A A A A A G G C C G C T T

3497 GCTGGCGTTTTTCCATAGGCTCCGCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAGATACCAG

3597 CGGTTTTCCCTGGAAAGCTCCCTCGTGCCTCTCTGTTCCGACCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTT

ApaLI (3758)

3697 CTCATAGCTCAGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTGCTCCAAGCTGGGCTGTGTGCACGAACCCCGTTTACGCCGACCGCTGCGCCTT

3797 ATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGC

3897 GGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGAACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAA

3997 GAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGA

EagI (4194)

4097 AGATCCTTTGATCTTTTCTACGGGTCTGACGCTCAGTGAACGAAACTCACGTTAAGGGATTTTGGTCATGGCTAGTTAATTAACATTTAAATC AGCG **PacI (4174)** **Swal (4183)** **NotI (4193)**

4197 GCCGCAATAAAATATCTTTATTTTATTACATCTGTGTGGTTTTTTTGTGTGAATCGTAACTAACATACGCTCTCCATCAAAAACAAACGAAACAAAA

4297 CAAACTAGCAAAATAGGCTGTCCCCAGTGCAAGTGCAGGTGCCAGAACATTTCTCTATCGAA